

SOIL CONSERVATION IN THE GREAT PLAINS OF THE UNITED STATES OF AMERICA

No area is completely safe from soil erosion by wind; but the Great Plains region of North America is particularly susceptible to this damaging force because of its unique climate. This vast region--about 1,300 miles long and 200 to 700 miles wide--extends almost from the Mississippi River west to the Rocky Mountains and from the Gulf of Mexico north into the Prairie Provinces of Canada.

Rainfall in the Great Plains is low and highly variable, and average precipitation is near the critical limits for success in crop production. Wind velocities are high, especially in spring and fall when vegetative ground cover is low because of the predominant one-crop economy (wheat).

For these reasons the climate of the region is notoriously hazardous and marked by recurrent drouth, floods, dust storms, and blizzards. As a result, agriculture in the Plains is a tough and risky business, making unusually severe management demands on farmers and ranchers.

Drouth periods are irregular and unpredictable, but the records show seven severe drouths in the past century: 1865 to 1875; 1890 to 1895; 1901 to 1904; 1910 to 1914; 1920 to 1925; 1933 to 1940; and 1952 to 1956. It is these long periods of dryness, rather than the occasional dry years, that present difficult problems.

Speech prepared for the Pan American Soil Conservation Congress by
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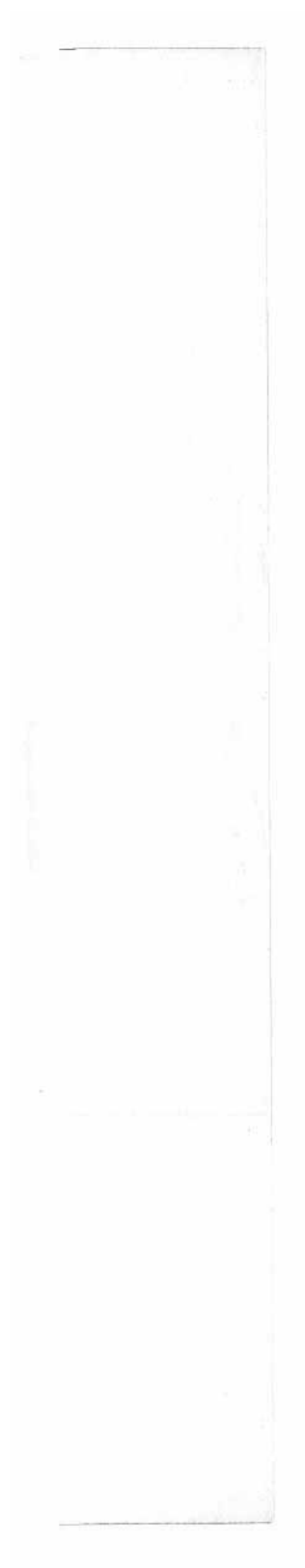
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The region is a distinct physiographic and climatic zone. Its basic characteristics, probably, are its flatness and dryness. These bind together the economy of the whole area, dictate an array of agricultural limitations, and condition the lives and attitudes of the residents. It may be further noted that while this is a major section of the United States, the region is not coterminous with any State or group of States--or with any river basin or group of river basins. It is a region of comprising parts of ten States and one that is intimately tied to its natural resource base.

Since the beginning of the present century exterior influences have had profound effects on agricultural developments in the region. Two World Wars, the depression of the 1930's, and the Korean action all contributed to a major expansion of cultivated crop production on lands that are only marginally suited for cultivation.

In the Great Plains alone, in 1955, about 16 million acres not suited for permanent cultivation were being cultivated. Much of this land offers low returns and is subject to severe erosion even in average years.
(See Table 1.)

For short periods--marked by more than "normal" amounts of rainfall--and with the assistance provided through Federal farm programs, the continued cultivation of marginal and near-marginal lands has been profitable for many owners. Conversely, when the periods of short moisture return, as they inevitably do, painful economic and land management adjustments become necessary.



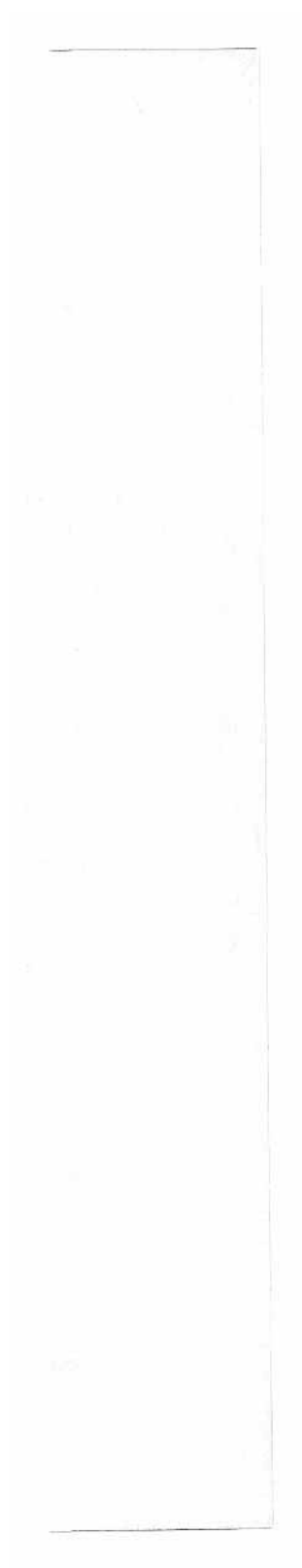
The objective of the Great Plains Conservation Program under the act is to assist farmers and ranchers in developing and carrying out, on a voluntary basis, a plan of operations that brings about greater stability through cropping and grazing systems and land-use changes and the application of enduring soil and water conservation practices. Nearly three decades of operations have established the very important contribution of soil conservation toward attaining long-range agricultural stability in the Great Plains region.

To carry out this program, the law provides for assurance of continuing financial and technical assistance to farmers and ranchers, in up to 422 designated counties, who present a satisfactory plan for their entire unit. This includes a time schedule for establishing cropping systems, making land-use changes and applying and establishing conservation practices.

More than 20,000 participants have entered into Great Plains Conservation contracts with the U. S. Secretary of Agriculture in the past eight years in this accelerated effort. (See Table 2.)

All existing programs that contribute to conservation are also used in attaining the objectives of the Great Plains Conservation Program.

Public Law 1021 provides, and the Secretary of Agriculture emphasizes, that the Great Plains Conservation Program is to be in addition to other conservation programs--Agricultural Conservation Program, Conservation Reserve, Soil and Water Conservation and Water Facilities Loans, and assistance to soil conservation districts--rather than in lieu of these programs. Each of the programs continues to make its maximum contribution to the improvement of Great Plains resources. However, Public Law 1021 makes several distinct contributions, including:



A major factor in the success of soil and water conservation work in the Great Plains is recognition by farmers and ranchers that they must make timely and effective use of the highly variable moisture supplies and provide for sound management and continuous maintenance of all applicable conservation measures. When it rains, in other words, farmers and ranchers should take prompt advantage of improved moisture conditions to apply permanent conservation measures and make the land use adjustments needed for a stable agriculture in the Great Plains.

It has been estimated that about three-fourths of the land now in cultivation in the Great Plains is suited for the growing of crops when the needed combination of cropping systems and conservation practices is installed. Therefore, the soil conservation objective in the Great Plains is to maintain the productive capacity of all land in the use for which it is best suited.

Most effective control of wind erosion in the Great Plains has been achieved where farmers and ranchers operating adjacent lands work in unison in applying conservation measures.

The Great Plains Program places high emphasis on all aspects of water conservation, including watershed protection, development and efficient use of water supplies, and management of cover and crop residues to improve soil permeability and water-holding capacity of the soil.

There are many sources of help, public and private, that farmers and ranchers and their local organizations use to speed their progress in conservation in the Great Plains area. The Soil Conservation Service helps inform them of and encourages them to make effective use of all such sources.

Many county and State governments are performing a particularly important service to the Great Plains Program. They are also encouraged by the farmers and ranchers and by their organizations to continue and to strengthen their participation in this program.

The Great Plains Conservation Program is of national public benefit because it includes protection, wise use and improvement of the soil, water, plant and wildlife resources and to bring about greater stability in this highly important agricultural area. To achieve this goal requires the fullest degree of cooperation and teamwork among individuals, organizations, and agencies in the Great Plains area.

WHERE WE ARE GOING

Experience has revealed the need for specific administrative guidance on priorities to meet the objectives of the program.

To better assure that expenditures of funds are used on operating units which need the type of assistance available under this program, priorities have been established for the guidance of SCS technicians (Work Unit Conservationists). In general, the kinds of operating units listed as being high and medium priority are those that are not now stabilized and which the Great Plains Conservation Program was specifically established to assist. Most of the operating units in low priority are now essentially stabilized and it is difficult to justify the expenditure of any great amount of Great Plains Conservation Program funds in their further treatment. So long as the SCS technician has operating units in the high and medium priorities among the applicants, he proceeds with planning assistance to them with the guidance of the district governing body and the Area Conservationist.

When applicants in the high and medium priorities have been served, the Area Conservationist refers the matter of providing assistance to any low-priority applicants to the State office for further consideration. The State office provides continuing guidance and close supervision to the Area Conservationists and SCS technicians in the designated counties to better insure proper use of Great Plains Conservation Program funds.

High Priority operating units are those that have:

1. Major problems of converting cropland unsuited to cultivation to permanent vegetation;
2. Major wind and water erosion and moisture conservation problems on rangeland, or on cropland suitable for continuous cropping; or
3. Wind erosion problems requiring simultaneous action whose owners and operators agree to act in unison.

Medium Priority operating units have:

1. Moisture conservation problems on non-irrigated cropland with slight erosion;
2. Vegetative and management problems on rangeland with slight erosion; or
3. Need for conversion of cropland suited to cultivation to permanent vegetation to meet the need of the operating unit.

Low Priority operating units are those that:

1. Consist entirely or almost entirely of irrigated land with only slight erosion problems;
2. Consist of non-irrigated cropland or rangeland with only slight erosion problems; or
3. Have a conservation program so nearly established that it can be completed with assistance available from other sources.

The Great Plains Conservation Program has been accomplishing an average of 22 percent conversion of cropland to less intensive uses-- primarily grass. These conversions accomplished under the contracts represent reductions primarily in wheat, cotton, and feed grains (mainly the wheatland-type milos).

Other important steps that aid in the administration of priorities of assistance to producers include:

1. The development of a sound educational program.
2. Use of the advice and counsel of Great Plains Program committees in which invited agency representatives are urged to take part.
3. The informal allocation of resources to the counties on the basis of workloads as shown by operating units in high and medium priorities, and the restriction imposed by the fund limitation. Essential fund flexibility between counties should be maintained.
4. Careful use of criteria for the selection of additional counties for inclusion in the program.

5. Guiding the development of conservation irrigation.

Any of the operating units in high to medium priority having small to medium amounts of irrigated land used for supplemental feed production will not be changed in priority because of this type of irrigation. All kinds of agricultural water conservation, including irrigation, under the policies of this program are very important in establishing greater stability of the area, but must be utilized in keeping with the principles of the program.

6. Guiding the scheduling of large operating units.

Size of operating units alone should not determine the priority of assistance to a producer. A sufficient number of medium to small farms and ranches should be scheduled to provide a representative balance in the use of resources.

7. Where needed, the State Conservationist for the Soil Conservation Service establishes policies and procedures for review of Great Plains Program plans prior to obligation of Federal cost-share funds.

SUMMARY

Soil resources of the Great Plains region are potentially capable of supporting a stable and prosperous agriculture and thus strengthening the segment of the national economy. But their improvement requires orderly

Table 1. Great Plains Area--Land Capability by Land Use for 422 Counties*

Land Capability Class	(Thousand acres)				
	Cropland	Pasture and Range	Forest and Woodland	Other	Total
I	3,668.7	698.7	104.3	50.8	4,522.5
II	31,353.6	9,509.4	379.6	453.9	41,696.5
III	50,007.0	24,947.0	471.1	668.5	76,093.6
I - III	85,029.3	35,155.1	955.0	1,173.2	122,312.6
IV	16,116.4	25,896.7	439.6	354.8	42,807.5
I-IV	101,145.7	61,051.8	1,394.6	1,528.0	165,120.1
V	162.7	2,596.6	212.5	16.8	2,988.6
VI	9,030.5	88,198.3	4,159.6	620.0	102,008.4
VII	1,130.6	60,826.6	7,125.5	297.8	69,380.5
VIII	3.4	587.5	416.2	880.7	1,887.8
V-VIII	10,327.2	152,209.0	11,913.8	1,815.3	176,265.2
Total:	111,472.9	213,260.8	13,308.4	3,343.3	341,385.4

*Information from the Conservation Needs Inventory of 1953.

The ten Great Plains States are: Colorado, Kansas, Montana, Nebraska, New Mexico, North Dakota, Oklahoma, South Dakota, Texas, and Wyoming.

Table 2. Progress Report--Great Plains Conservation Program--July 1, 1965 to September 30, 1965 and Cumulative to September 30, 1965

	No. of Desig. Co.'s	GP Contracts Signed			Total			Planned Cropland Conversions		Unserviced Appli- cations
		Number		Acres	Cost-Share Obligations		3 Mos.	To Date		
		3 Mos.	To Date		3 Mos.	To Date				
Colorado	36	36	1,337	133,274	4,349,379	\$145,907	\$8,081,793	3,772	122,667	585
Kansas	55	93	2,196	54,725	1,717,110	204,199	5,730,827	2,454	69,766	564
Montana	36	24	960	103,714	4,164,504	118,596	4,999,673	3,649	141,359	342
Nebraska	58	163	2,890	147,159	3,537,540	625,457	9,003,169	7,972	166,803	708
New Mexico	17	40	967	233,786	6,744,635	210,103	5,868,599	144	49,566	278
North Dakota	30	54	2,413	52,156	3,185,230	105,380	5,233,231	3,486	265,932	443
Oklahoma	20	63	1,661	35,037	2,114,887	155,677	4,811,929	773	71,686	403
South Dakota	36	21	884	59,770	2,981,328	54,861	4,578,847	1,971	118,490	189
Texas	98	196	7,088	234,328	10,104,466	970,827	22,273,213	5,698	312,907	672
Wyoming	9	5	257	45,515	1,426,443	44,175	2,066,792	-	13,076	68
TOTAL	395	695	20,653	1,099,464	40,325,522	\$2,635,182	\$72,648,073*	29,919	1,332,252	4,252

Average per contract 1,582 1,952 \$3,792 \$3,518

Planned cropland conversions (percent of total cropland in GP contracts) 22%

* Cumulative expenditures are about \$49 million leaving a balance of \$24 million unpaid cost-share obligations.

